

Case 3653

***Acanthurus* Forsskål, 1775 (Osteichthyes, ACANTHURIDAE): proposed conservation by designation of *Chaetodon sohal* Forsskål, 1775 as the type species**

Vahe D. Demirjian

11 Canyon Terrace, Newport Coast, CA 92657, U.S.A.

(e-mail: vahedemirjian@cox.net)

Abstract. The purpose of this application, under Article 81 of the Code, is to conserve the widely used generic name *Acanthurus* Forsskål, 1775 in its accustomed usage by the designation of *Chaetodon sohal* Forsskål, 1775 as the type species. The nominal species *Chaetodon unicornis* Forsskål, 1775 is currently the type species of *Acanthurus* by the subsequent designation of Jordan & Everman (1898), but this species currently belongs in the unicornfish genus *Naso* Lacepède, 1801, effectively rendering *Acanthurus* a senior synonym of *Naso*. It is proposed that all previous type fixations for *Acanthurus* including the one by Jordan & Evermann (1898) be set aside and that *C. sohal* be designated the type species of *Acanthurus* in accordance with the current usage of *Acanthurus*.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; ACANTHURIDAE; *Acanthurus*; *Naso*; *Acanthurus sohal*; surgeonfishes; tropical Indo-Pacific.

1. Forsskål (1775, p. 59) described *Acanthurus* as one of three subgenera of his genus *Chaetodon* Forsskål, 1775 (the others being *Chaetodon sensu stricto* (butterflyfishes) and *Abudefduf* (a genus of damselfishes including the sergeant majors)). He then described numerous species of *Chaetodon* without specifying which ones belonged in *Acanthurus*, leading many authors to mistakenly believe that there no species originally included in *Acanthurus*. Nevertheless, he (p. ii) listed the following species under the heading ‘*Acanthurus* (*Chaetodon* 88–91.)’: *Chaetodon bifasciatus*, *C. nigrofuscus*, *C. sohal* and *C. unicornis*.

2. Of the four originally included species of *Acanthurus*, only *Chaetodon nigrofuscus* and *C. sohal* fall within the current concept of *Acanthurus* (Fricke, 1999; Myers, 1999; Randall, 1956, 2002), while *C. unicornis* belongs in the unicornfish genus *Naso* Lacepède, 1801 ((Borden, 1998; Myers, 1999; Randall, 2002). On the other hand, *Chaetodon bifasciatus* is a species of the seabream genus *Acanthopagrus* Peters, 1855 (Bauchot & Smith, 1984).

4. Lacepède (1802) erected the genus *Aspisurus* for *Chaetodon sohal* Forsskål, 1775 (p. 63). *Aspisurus* was synonymized with *Acanthurus* by Randall (1955, 1956).

5. Since no type species for *Acanthurus* was designated by Forsskål, the first designation of a type species was done by Valenciennes (1840, pl. 71, fig. 2), who selected *Acanthurus xanthopterus* Valenciennes in Cuvier & Valenciennes, 1835 as the type species for *Acanthurus*. However, this type species designation is invalid because *A. xanthopterus* was not among the originally included species of *Acanthurus*, although it belongs in the same genus as *A. nigrofuscus* and *A. sohal*.

6. Desmarest (1856, p. 246) designated *Teuthis hepatus* Linnaeus, 1766 (currently *Paracanthurus hepatus*) as the type species of *Acanthurus*, but this too was invalid because *T. hepatus* was not among the originally included species of *Acanthurus*. This type species designation was followed by Whitley (1939) and Eschmeyer (1990) and who were probably unaware that Forsskål did not include *T. hepatus* in *Acanthurus*. Later, Desmarest (p. 247) designated *Chaetodon chirurgus* Bloch, 1787 as the type species, disregarding that it too was not originally included in *Acanthurus*.

7. In their catalogue of all named fish genera, Jordan & Evermann (1898, p. 1689) listed *Chaetodon unicornis* Forsskål, 1775, in parenthesis following the entry for the genus *Acanthurus*. Throughout the three and a fifth text volumes of the work, after each genus name in their synonymies, they provide the name of one of the originally included species, seemingly the first mentioned in the original description. Since *C. unicornis* was one of the originally included species of the genus, their type species designation can be technically valid in compliance with Article 69.2 of the Code. Throughout the three and a fifth text volumes of Jordan & Evermann's (1898) work, after each genus name in their synonymies, the authors provided the name of one of the originally included species, seemingly the first mentioned in the original description, with no explanation of the selection. However, this could be a valid type species designation, and it was interpreted as such by later authors (e.g. Kottelat, 2013, pp. 4, 442). Later, Jordan & Evermann (1917) disregarded their 1898 type species designation by fixing *C. sohal* as the type for *Acanthurus*, which is invalid because of an earlier valid designation.

8. As the type genus of the family-group name ACANTHURIDAE Bonaparte, 1832 and the subfamily-group name ACANTHURINAE, the genus *Acanthurus* is currently in use for more than a dozen species of surgeonfishes from the Indo-Pacific and Atlantic Oceans and *Chaetodon unicornis* has been universally recognized as a species of the unicornfish genus *Naso* (Borden, 1998; Myers, 1999; Randall, 2002). If, as stressed by Kottelat (2013, p. 442), the designation of *C. unicornis* as the type species by Jordan & Evermann (1898) is accepted, then *Naso* would become a junior synonym of *Acanthurus* and *Aspisurus* Lacepède, 1802 would be the next available name for all surgeonfish species. However, adopting such a change would create nomenclatural instability because past and current usage of *Acanthurus* refers to acanthurid species that are part of ACANTHURINAE (including *Acanthurus nigrofuscus* and *A. sohal*) and *Naso* has been in use for the unicornfishes (including *Naso unicornis*) (e.g. Jordan & Evermann, 1917; Herre, 1927; Randall, 1955, 1956, 2002).

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Acanthurus* Forsskål, 1775 and to designate *Chaetodon sohal* Forsskål, 1775 as the type species;
- (2) to place on the Official List of Generic Names in Zoology the name *Acanthurus* Forsskål, 1775 (gender: masculine), type species *Chaetodon sohal* Forsskål, 1775, as ruled in (1) above;
- (3) to place on the Official List of Specific Names in Zoology the name *sohal* Forsskål, 1775, as published in the binomen *Chaetodon sohal* (specific name of the type species of *Acanthurus* Forsskål, 1775).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).